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ABSTRACT

Six steps are described which can be used to evaluate a section of an extension program (e.g., the extension agent may have a corn program promoting a new variety and wants to know how many farmers are planting that variety). The steps are (1) state your objectives, (2) identify source of proof, (3) choose a representative sample, (4) use appropriate methods (collecting evidence and using a questionnaire), (5) ask the right questions, and (6) plan to use results of evaluation. Each step includes a detailed description of the processes involved in that step along with an example. (SH)

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EVALUATING EXTENSION WORK

A Guide for Village Workers

Extension Service
U.S. Department of Agriculture
in cooperation with
Agency for International Development
U.S. Department of State

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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Foreword

Agricultural and home economics Extension workers in many countries have asked for a guide in evaluating extension programs. This publication may be useful to the extension worker who needs to evaluate the effectiveness of his programs.

Cover:

Asking the right questions is one important step in evaluation.

EVALUATING EXTENSION WORK

A Guide for Village Workers

To evaluate:

1. State Your Objectives
2. Identify Source of Proof
3. Choose a Representative Sample
4. Use Appropriate Methods
5. Ask the Right Questions
6. Plan to Use Results of Evaluation

Extension work is educational, and extension workers are teachers. They teach people to change, to adopt approved practices.

As an extension worker, you need to know what changes people are making as a result of your teaching. The people you work with and who help plan and conduct the program need to be aware of change and to know the results also.

Extension workers keep records of some facts about programs. Often, they need to know more about a program's success or failure than routine records can tell. If they want to know about the success of a new program or a new method of teaching, they will need to *evaluate.*

Any extension worker can conduct an evaluation, and you should do so. You can evaluate a small segment of the program at a time. This can be a simple part of the ongoing program.

It is important that evaluation be done in a reliable and objective manner. Otherwise, wrong conclusions may be drawn from it.

You may be using radio for the first time and want to know if you are reaching the farmers you want to reach. Or you may have a corn program promoting a new variety and want to know how many farmers are planting that variety. You may have been teaching village women how to grow tomatoes in their gardens and want to know how many families are growing tomatoes. An extension worker can evaluate and determine the extent to which planned-for changes are taking place.

EVALUATION

—Is a part of teaching.
—Can be built into each step of program development—organization for program development; program determination; plan of work; program action; and program outcomes.
—Can provide information for improving programs, teaching, and reporting on accomplishments.

The following are six "keys" to evaluating a segment of your program:

1 STATE YOUR OBJECTIVES

State the objectives of the activity to be evaluated, in terms of the changes that are to occur in the people who are to do the learning.

This is the first key to reliable evaluation. You need to decide what changes you want to bring about in people. Evaluation is determining whether or not these changes occur. Define these changes and state them clearly in your objectives.

Changes in people will show up in new knowledge, in attitudes, or in action—things they do. Objectives must state what people are to know, to feel, or to do. Objectives must also identify clearly who it is you want to make the change: for example—farmers raising corn, women with babies under 1 year of age, or all the farmers in a village.

Example of an Objective:

This . . . Corn farmers to plant the new variety of corn.

Not this . . . To inform farmers about the need to plant the new variety of corn.

Not this . . . To hold meetings on the value of raising the new variety of corn.

In the first statement, behavior change of the learner is stressed. In the other two statements, activity of the extension agent is emphasized.

Also, in the first statement, you emphasize *who* (the corn farmers) and *what change* (plant new variety).

Other objectives might be:

—Village women to learn the value of feeding green vegetables to their families.

—Boys and girls in youth clubs to understand how food affects health.

—All farmers in a village with olive trees to spray with recommended chemicals.

Only the people involved in the program can provide proof of success or failure.

A defined audience is essential to evaluation. The program objective should specify whom the program is to reach.

When you evaluate, the only people who can provide evidence of the success of the program are those who became involved or participated. These will be people who attended your meeting, heard your radio talk, saw your exhibit, or learned from people that you contacted.

Take, for example, an extension worker whose objective was to have all corn farmers in a community treat seed before planting. Suppose he conducted a meeting and demonstrated how to treat the seed. Then, he wanted to know how effective his demonstration was, so he went to the farmers who attended the meeting to find out if they were treating seed as he recommended.

Another example is the extension worker whose program objective was to have all mothers of babies 6 months and over feed fruit juice to their babies. This extension worker used several methods, including demonstrations, meetings, home visits, exhibits, and posters. The people who can provide proof of the effectiveness of this extension worker's teaching are the women who were involved in the program, and had babies of 6 months or older.

If you want to check on the effectiveness of an exhibit, you can find out only from those who saw it. To check on the effectiveness of a radio program, you ask people who heard your broadcast.

Those who can provide proof of success are:

These . . . The corn farmers who attended the meeting, heard your radio talk, saw your exhibit, etc.

Not these . . . All corn farmers

Nor these . . . All farmers in the community.

The people who provide the evidence of success must be representative of all those you tried to reach.

Extension workers reach many more people in their teaching than they can collect evidence from to provide the proof of their success or failure. They also teach more than they have time to evaluate. You need to get information from only a *part* (sample) of the people, about the *part* of the subject you wish to evaluate.

All of the people who could have learned what you were teaching would usually be too many to ask. When you get evidence from only part of the number of people you reached, you are "sampling" those who were reached.

How to select this sample:

Use a random sampling method. This gives every person in the total group an equal chance to be selected. This is important if the sample is to be representative of the group, and if the results are to be reliable. If you select the farmers you know well or who have large farms, you are very apt to distort the results. In such a case, the sample is not representative of the whole group and your findings will not be reliable. When the "sample" method is used, there are some rules for selecting names.

A common way to sample is to choose every "nth" name—

the third, seventh, etc.—from a list of names of all people who participated. For instance, list the names of all rice farmers who participated in the program. If there are 200, and you want a sample of 40, divide 40 into 200 (this gives you 5). Then check every 5th name on your list. These 40 farmers will be your sample. In this way, *chance* decides who is included in the sample. These are the people from whom you will collect evidence of program success.

The sample needs to be large enough to assure that most of the characteristics, such as age, education, and size of farm, of the total group will be represented. It is always important to observe or ask questions of all people included in a sample. Do not, for instance, use only rice farmers who came to your office as your sample; they would represent only a part of all the rice farmers. The information you obtain would not be reliable for the total group.

Example

This ..... Every "nth" name from list of farmers. Check to see that each farmer selected has answered all questions.

Not this ... Questionnaire sent to all farmers; use those which are returned.

Nor this ... Collect evidence from farmers who call at your office or who you visit during routine work.

The methods of obtaining evidence must be appropriate to the kind of evidence being collected and the resources you have to collect it.

The method you use depends on the characteristics of the people from whom you will collect evidence, what you want to find out, and on the time and other resources you have available for evaluation.

Evidence of success of educational programs is that which indicates whether or not learning has occurred. Sometimes, evidence will be in the form of action by the learner, as when a farmer inoculates a chicken, or a woman cuts out a garment correctly. Evidence shows up as *action*, such as a family's building a smokeless stove. Sometimes, learners pass on information to others, who in turn carry out the action. Thus, you may find a smokeless stove built by the family next door to the one you taught.

Teaching may also bring about change in attitudes and knowledge. Attitude changes may be indicated by what people do or say. The man who first opposes cooperatives and then joins one has changed his attitude. Evaluate programs in terms of changes in people, not in terms of what you do.

Collect evidence for evaluation by observing and asking questions.

Whenever possible, use your own observation. Look and listen; then, record your observations.

First, identify the practices that will be evidence of success. These will be things people *do*, such as planting a garden, fencing chickens, or building a storage bin for corn. Then, prepare a simple record sheet for recording your observations.

For example, if your objective is for every family in the village to have a garden, and you have taught them how to prepare the land, plant, and transplant, you may make a record sheet on which all these items can be recorded by checking:

Family name	Spaded garden	Made beds	Planted seeds in seed boxes				Planted seed in garden	Transplanted seedlings
			1 Kind	2 Kinds	3 Kinds			
Family #1								
Family #2								
Family #3								

Using a Questionnaire

For some evaluations, it is necessary to use a questionnaire—a list of planned questions related to a particular topic, with space provided for recording the response to each. In some places, questionnaires may be mailed to people, but in village work this usually is not practical. The questionnaire is filled out by the extension worker if it is not possible or appropriate for the person being interviewed to do it.

Always ask yourself: who can provide reliable and useful evidence? Who can get it from them?

Example

This ..... Record observations or responses on what the person interviewed does in his community before and after the program.

Not this ... Ask him if he is now more interested in his community.

Nor this ... Ask him what he has done in his community.

5. ASK THE RIGHT QUESTIONS

Word questions carefully so that you will obtain reliable, unbiased data.

Questions can help you in observing results. Here are a few guides for asking questions:

- Ask questions that are clear, specific, and have definite answers.
- Ask questions that are easy to understand.
- Ask questions without implying the answer you desire.
- Avoid questions that involve more than one idea.
- Pre-test the questions with a few people first, to see if they understand and can be answered.
- Be sure that the time period covered by each question is understood.
- Ask questions exactly the same way every time.

For example, if you ask questions about an educational tour:

This ..... Did you see any new methods of fertilizing rice on the tour?
Yes_____
No_____
If YES, what were they?

Not this ... What new methods of fertilizing rice did you see on the tour?

Nor this ... Didn't you think the tour was helpful?
Yes_____ No_____
Don't know_____

The first part of the first question is specific. The second part of the question checks the reliability of the response to the first part.

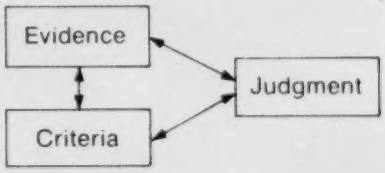
The second question starts out by assuming that everyone saw something new. This forces an answer.

In the third question, the desired answer is implied and the meaning of the word "helpful" is not clear.

6. PLAN TO USE RESULTS OF EVALUATION

Decide before you collect evidence how you will analyze the data and use the results of your evaluation.

The foundation of the concept of evaluation lies in these three elements: *evidence*, *criteria*, and *judgment*.



Evidence is that which provides proof of the extent to which the things, actions, qualities, etc., we are examining are present. It is that which is accepted as proof.

A *criterion* is a measure against which something can be judged. It is a standard, norm, or behavior which is considered "good" or "ideal," a description or image of what an effective program is like.

Judgment is the part of the evaluation process in which conclusions are considered, decisions are made, and value is assigned to that which is being evaluated. Judgment is comparison. Evidence and criteria assist in forming sound judgment, but neither substitutes for judgment.

In order to arrive at a judgment, the evaluator must first have a clear idea of what "should be." He must have some standards, norms, or descriptive statements called criteria. He selects criteria relevant to the kind of judgment that he needs to make. The criteria determine the kinds of evidence he must collect and analyze. Then, he compares the evidence of what is in line with the criteria and arrives at judgments.

Thus, *evaluation* includes studying the evidence and relating the analysis of it to objectives, criteria, and methods, in order to determine whether changes need to be made.

Since evidence is collected from a number of people, you as the evaluator will need to add up the evidence collected. Converting totals into percentages or averages provides statistics that enable you to speak for people as a group and to make comparisons of groups of different sizes. If you have sampled properly, percentages and averages can be applied to the total group from which the respondents were selected.

In relating your data and criteria in the summary and analysis step, your interpretation is of great importance. Study the percentages and averages and relate them to criteria with questions like these in mind:

Is this percentage high, low, expected, or unexpected?

What was done or not done to cause it to be this high or this low?

What other factors are relevant?

How might the program or the methods be changed to bring about a different kind or a different amount of change?

Two possible results can occur as a result of collecting evidence for evaluation and summarizing, analyzing, and interpreting the data: (1) programs can be adjusted to fit the needs, and (2) you become more competent and efficient as an extension worker.

Cooperative Extension Work: United States Department of Agriculture and State Land-Grant Universities Cooperating.

When we evaluate extension work:

- We evaluate in terms of objectives and criteria.
- We collect evidence from the people.
- We record, analyze, and interpret the evidence.
- We use the findings to improve programs and our own competence as extension workers.

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